DOCUMENT RESUME

ED 176 976 SE 028 883

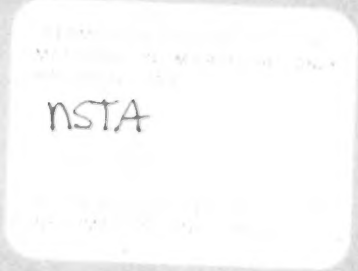
TITLE	Guidelines for Self-Assessment of Secondary-School Science Programs, 3: Science Student/Teacher Interactions in Our School.
INSTITUTION	National Science Teachers Asscciatien, Washington, D.C.
PUB DATE	78
NOTE	12p.; For related documents, see SE 028 881-885; Not available in hard copy due to ccpyright restrictions; Contains light and broken type
AVAILABLE FROM	National Science Teachers Association, 1742 Connecticut Ave., N.W., Washington, D.C. 20009 (Order No. 471-14740; $5.00 complete set, $1.00 ea.)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Achievement; Classroom Communication; Classroom Environment; *Educational Assessment; Evaluation Methods; *Interpersonal Relationship; *Measurement Instruments; *Program Evaluation; Science Curriculum; Science Departments; Science Education; Science Teachers; Secondary Education; *Secondary School Science
IDENTIFIERS	*National Science Teachers Association

ABSTRACT

This is part of a series of four modules intended to present guidelines for self-assessment of secondary science teachers. This module describes two main purposes for the assessment of interactions. The first is to determine the degree and characteristics of rapport between students and teachers. The second is to show the degree of correlation between teachers' perceptions of teaching behaviors and students' perceptions of the behaviors. This assessment is to be completed by students and teachers. (SA)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Guidelines for Self-Assessment of Secondary-School Science Programs



3. Science Student/Teacher Interactions in Our School

National Science Teachers Association

Copyright 1978
by the
National Science Teachers Association
1742 Connecticut Avenue, N.W.
Washington, D.C. 20009

This module is one part of a set of guidelines for the self-assessment of science programs, prepared by the National Science Teachers Association. The modules in the set are:

1. **Our School's Science Curriculum**
2. **Our School's Science Teachers**
3. **Science Student/Teacher Interactions in Our School**
4. **Science Facilities and Teaching Conditions in Our School**

Prices for the complete set and for individual modules are:

Complete Self-Assessment Package		471-14746	$5
Modules:	Curriculum	471-14736	$1
	Teachers	471-14738	$1
	Interaction	471-14740	$1
	Facilities	471-14742	$1
Report Form		471-14744	$1

Ordering Information: The complete Self-Assessment package includes an introductory preface, one copy of each of the modules, and a report form. The modules may be ordered separately by title and stock number. All orders must be prepaid except those on official order forms. Prepaid orders under $10.00 add $ .50 postage and handling; over $10.00 add $1.00 postage and handling. Shipping and handling charges will be added to all billed purchase orders. Please make checks payable to NSTA.

III. Science Student/Teacher Interactions in Our School

It could be argued that the focus of this module transcends in importance the targets of all the other modules in the school science self-assessment package, dealing as it does with the interpersonal relationships between students and teachers. The purpose of the module is twofold.

The first purpose of the assessment called for in this module is to determine the degree and characteristics of rapport between students and teachers. The second purpose is to reveal the degree of correlation between teachers' perceptions of certain teaching behaviors and students' perceptions of those behaviors.

The module is designed to be answered by teachers and by students. After completion of Part A, teachers and students should get together and try to develop agreement or consensus on the degree to which certain qualities of humaneness (mutual respect, working-togetherness, love) exist, or operate in both directions, between students and teachers. Try also to develop consensus on the degree of importance or desirability of each of these as a factor in promoting the teaching and learning of science in your school. Part B is to be done separately by teachers and students. Separate matrices are provided in the report form for the data after teacher consensus and student consensus are attained. Suggestions for doing each part appear at the beginning of the part.

A twofold assessment is called for — the first in terms of the DESIRABILITY of the various aspects of preparation, professional activities, and attitudes, for **your teaching situation** and **your school**. The second is an assessment of the degree of ACHIEVEMENT of the item. The rating scales to be used are as follows:

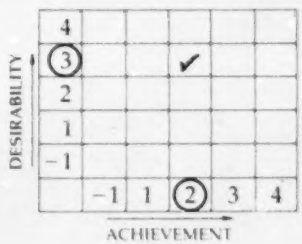
DESIRABILITY for Our School

4 — **very desirable;** of utmost value
3 — **desirable;** of significant value
2 — **moderately** desirable; of medium value
1 — **unimportant;** of insignificant value in our school science program
—1 — **undesirable;** of negative value in our school science program

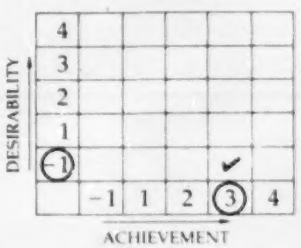
ACHIEVEMENT in Our School

4 — **excellent;** outstanding, extremely high level
3 — **very good;** above average
2 — **moderate** but significant; above average
1 — **low** (small) achievement or practice; below average
—1 — avoided or counteracted in our school

At the right of each item is a small matrix in which the rating is recorded. The vertical axis represents DESIRABILITY. The horizontal axis represents ACHIEVEMENT. Circle the rating that you wish to give to achievement. Then, for the score on this item, place a check mark in the box where these ratings intersect. Thus, an item that was deemed highly desirable but only moderately achieved would be recorded as follows:



An item considered undesirable, but found to be present to a high degree would be recorded as follows:



A. Quality of Student/Teacher Personal Relationships

This part of the assessment should be done by a representative group of students and science teachers. Try to think in terms of the overall, the large picture, and develop ratings not swayed or biased unduly by infrequent exceptions. Consider and discuss the items that follow, plus others you may wish to add.

1. We meet each other on our own level, so neither students nor teachers seem to be aloof, withdrawn, superior, or inferior.

Comments _____

2. Teachers show genuine, personalized interest in the students.

Comments _____

3. Our classroom atmosphere is such that individual communication is permitted between teacher and students and within small student groups, without interrupting others.

Comments _____

4. Teachers and students understand and accept that it is the role of teachers to define and set out what is to be done and the role of students to follow directions and carry out the work assigned.

Comments _____

5. We discuss together the evaluation procedures used in our classes, that is, how grades will be determined.

Comments _____

6. Problems, handicaps, and special needs are identified and are accepted with consideration, understanding, and sympathy from both teacher and students.

Comments _____

7. Teachers and students recognize that individual special projects and special activities are time consuming and must be conducted with due regard for the teacher's responsibility to the whole class and the students' responsibility for regular classwork.

Comments _____

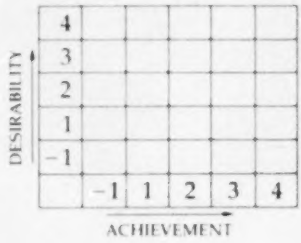
8. There is mutual respect between teacher and students, as evidenced by commending, accepting, and helping each other.

Comments _____

9. Teachers and students listen and pay attention to one another when questions are asked, explanations are given, controversial issues arise, or alternative actions are being considered.

Comments _____

10. When conflicts occur that seem difficult or critical, teachers and students both recognize that it is the responsibility of teachers to make final decisions.

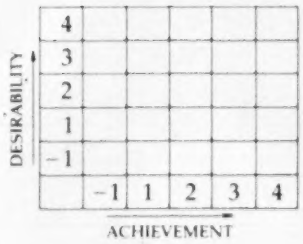


Comments _____

11. Students feel free to share their feelings with their science teachers when tense situations occur.

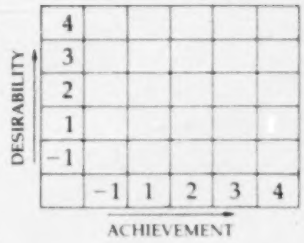
Comments _____

12. Teachers and students both understand that school activities must be carried on within the bounds of legal responsibilities and requirements that cannot be ignored.



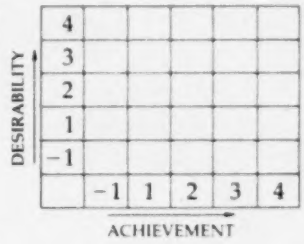
Comments _____

13. Teachers and students have clear understanding about the safe and acceptable practices in the science classroom, laboratories, and on field trips.



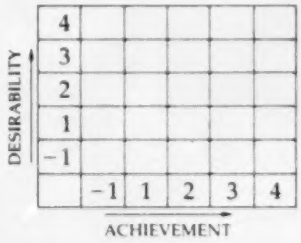
Comments _____

14. Teachers spend extra time with students, as needed, before or after school or during weekends.



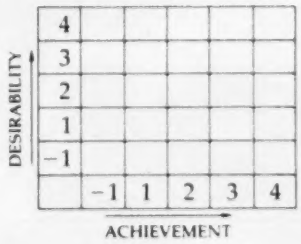
Comments _____

15. Teachers show interest in students by attending extracurricular activities.



Comments _____

16. Teachers willingly become involved in extra curricular activities.



Comments _____

17. Teachers are willing to take time to hold individual conferences with students.

Comments _____

_____

_____

18. Teachers consistently seek ways to build good relationships with students.

Comments _____

_____

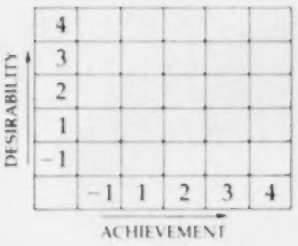
_____

19. Other: _____

_____

_____

_____



Comments _____

_____

_____

20. Other: _____

_____

_____

_____

_____

Comments _____

_____

_____

_____

B. Teacher and Student Perceptions of Teaching Practices

(To be completed by individual teachers and by students)

This part of the assessment is designed so that each individual teacher may do a self-evaluation of how he or she perceives his or her teaching behaviors. The goal of this assessment is to show how the teachers individually, and as a group, perceive their teaching behaviors. The presumption is that this will be an interesting revelation to the individual teacher as well as to the science faculty as a group.

A representative committee of students is also to do an assessment of the teachers' teaching practices.

After the teacher assessments have been completed, the various individual ratings should be tallied, respectively, in one summary matrix as follows:

A separate matrix should be completed by the student committee. The teacher and student results could be sent to NSTA. The results should be discussed seriously by the teachers and the students at the local school level.

1. Teachers help students discover the deeper meanings and the applications of science concepts rather than merely having students memorize them.

Comments _____

_____

_____

2. Students understand what is taking place in their classes — and why, to what ends or goals.

Comments _____

_____

_____

3. Teachers vary the activities in classes.

Comments _____

4. Teachers exhibit enthusiasm for teaching science.

Comments _____

5. In discussions of the content of textbooks, teachers emphasize details of the material.

Comments _____

6. Teachers schedule laboratory activities so that they relate to classroom consideration of the same topics.

Comments _____

7. Teachers arrange laboratory work so that it will focus on the topic **before** it is discussed in class.

Comments _____

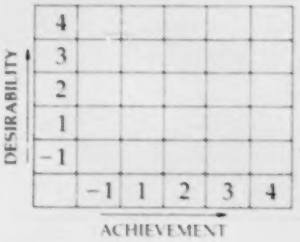
8. At the conclusion of a laboratory session or very soon thereafter, teachers help students analyze the outcomes.

Comments _____

9. Teachers allow individual students or small groups to do laboratory work to investigate problems or questions that arise from class discussion.

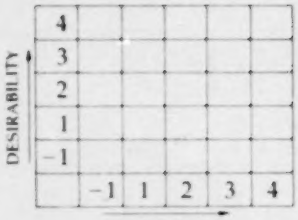
Comments _____

10. Teachers permit students to conduct classroom demonstrations if it is safe for them to do so.



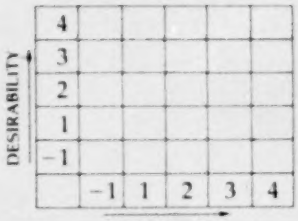
Comments _____

11. Teachers give homework assignments requiring students to locate and write out definitions of terms.



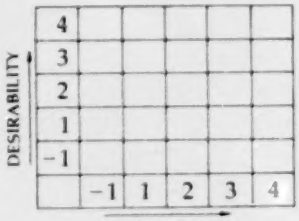
Comments _____

12. Discussions and questioning in the classroom require students to learn many details from the textbooks.



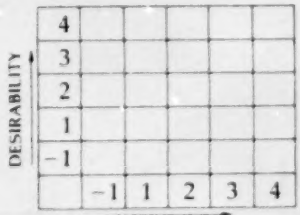
Comments _____

13. Tests, quizzes, and examinations require students to know definitions of terms and details from the textbooks.



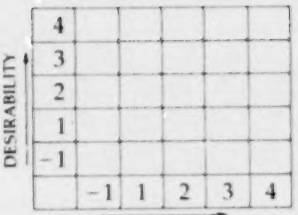
Comments _____

14. Teachers help students learn to make effective use of their textbooks and other instructional materials.



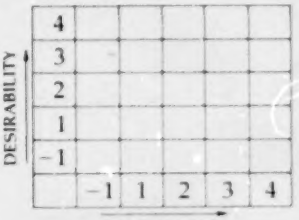
Comments _____

15. Teacher questioning and class discussion require students to gather and correlate information from many sources other than the textbook and teacher lectures.



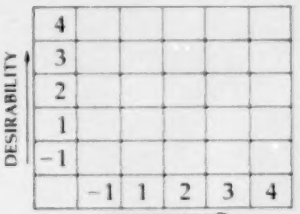
Comments _____

16. Teachers encourage and help students to set their own goals for the course and evaluate their own work.



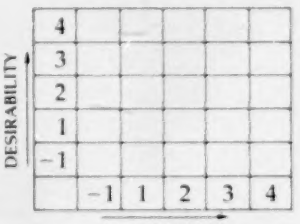
Comments _____

17. Students' laboratory work makes up a high percentage of their grade.



Comments _____

18. In tests and examinations, teachers ask students questions on what has been learned that allow for the application to new situations.



Comments _____

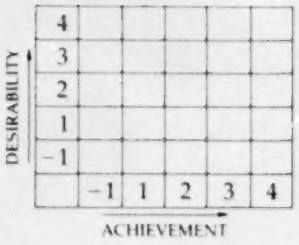
19. In tests and examinations, students are called upon to interpret data presented in written or graphic form (tables, charts, diagrams).

Comments _____

20. Teachers give laboratory practicals as part of the program of student evaluation.

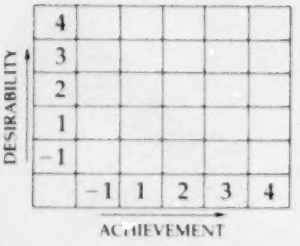
Comments _____

21. Skills that have been learned in laboratory are tested using laboratory equipment.



Comments _____

22. Essay items are included on tests and examinations.

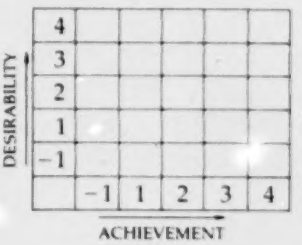


Comments _____

23. Teachers provide alternative ways for students to earn credit and improve their grades (marks) other than paper-and-pencil tests.

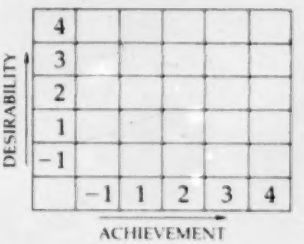
Comments _____

24. Teachers praise students spontaneously and sincerely for work well done.



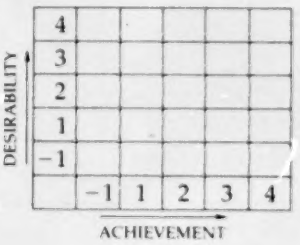
Comments _____

25. Teachers critique student work constructively and humanely without students being "put down."



Comments _____

26. Teachers accept the ideas and suggestions of students and build them into their teaching procedures.



Comments _____

27. Teachers respond to students' questions by posing other questions to guide the students' thought.

Comments _____

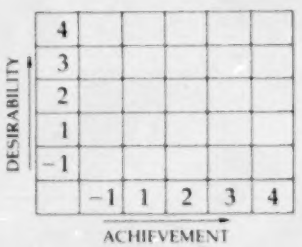
28. During class discussions teachers encourage students to initiate comments and questions and direct them to other students.

Comments _____

29. Teachers employ open-ended, thought-provoking questions.

Comments _____

30. To help prepare students for laboratory work, teachers demonstrate any new laboratory techniques required and give explicit directions.



Comments _____

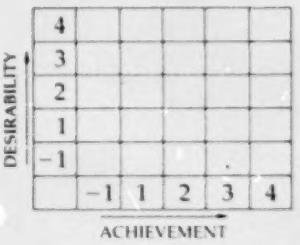
31. Teachers make students feel that it is important to determine the "right" answer to laboratory work.

Comments _____

32. Teachers encourage students to refine their laboratory work so as to decrease the margins of error and uncertainty.

Comments _____

33. Teachers show warmth and understanding by being sensitive to the feelings of students.



Comments _____

34. Teachers help students to organize their work so that the student will experience success.

Comments _____

35. Teachers attempt to individualize instruction by first assessing student's needs and interests.

Comments _____

36. Almost all of the science class time is involved in teacher lectures, question-answers, and textbook readings.

Comments _____

37. Collected assignments are returned and discussed by the class not later than two days following their collection.

Comments _____

38. Almost all laboratory activities are conducted as teacher demonstrations.

Comments _____

39. Other: _____

Comments _____

40. Other: _____

Comments _____